WHAT IS CLAIMED IS:

1. A method for correcting defects in an imaging system comprising the steps of:

transmitting a digital image to at least one spatial light modulator;

capturing said resulting image;

comparing variations in intensity between each image pixel and at least one reference image pixel;

deriving a correction factor from said comparison;

determining gain of correction at each code value for each image pixel; and

applying said correction factor and gain to said digital image.

2. A method for correcting defects in an imaging system as in claim 1 wherein said resulting image is captured by a digital camera.

3. A method for correcting defects in an imaging system as in claim 1 wherein said spatial light modulator is a LCD.

4. A method for correcting defects in an imaging system as in claim 1 wherein said resulting image is captured by:

printing said resulting image; and

scanning said resulting image.

5. A method for correcting defects in an imaging system as in claim 1 wherein said transmitted digital image is a flatfield of single code value.

6. A method for correcting defects in an imaging system as in claim 1 wherein said gain is determined at specified code values.

7. A method for correcting defects in an imaging system as in claim 6 wherein said gain is determined by varying gain and visually selecting gain value.

8. A method for correcting defects in an imaging system as in claim 6 wherein said gain is determined by varying gain and measuring standard deviation.

9. A method for correcting defects in an imaging system as in claim 6 wherein said gain is determined by varying gain and measuring spatial frequency components.

10. A method for correcting defects in an imaging system as in claim 6 wherein said gain is determined for every code value.

11. A method for correcting defects in an imaging system as in claim 6 wherein said gain is determined at selected code values and best fit curve is determined.

12. A method for correcting defects in an imaging system as in claim 6 wherein said gain is constant for all code values.

13. A method for correcting defects in an imaging system as in claim 6 wherein said gain is linear as a function of code value.

14. A method for correcting defects in an imaging system as in claim 1 wherein said gain the first derivative of the response characteristic of the spatial light modulator.

~~15. A method for correcting defects as in claim 1 wherein~~ defect maps are created at multiple code values.

16. A method for correcting defects in an imaging system as in claim 1 wherein multiple defect maps corresponding to multiple spatial light modulators are generated.

17. A method for correcting defects in an imaging system comprising the steps of:

transmitting a digital image data to at least one pixilated device;

displaying said resulting image;

capturing said resulting image;

comparing variations in intensity between each image pixel and at least one reference image pixel;

deriving a correction factor from said comparison;

determining gain of correction at each code value for each image pixel; and

applying said correction factor and gain to said digital image.

18. A method for correcting defects in an imaging system as in claim 17 wherein said resulting image is captured by a digital camera.

19. A method for correcting defects in an imaging system as in claim 17 wherein said spatial light modulator is selected from a group comprising an organic Light Emitting Diode array, a Light Emitting Diode array, a laser array, and a CRT.

20. A method for correcting defects in an imaging system as in claim 17 wherein said resulting image is captured by:

printing said resulting image; and

scanning said resulting image.

21. A method for correcting defects in an imaging system as in claim 17 wherein said transmitted digital image is a flatfield of single code value.

22. A method for correcting defects in an imaging system as in claim 17 wherein said gain is determined at specified code values.

23. A method for correcting defects in an imaging system as in claim 16 wherein said gain is determined by varying gain and visually selecting gain value.

24. A method for correcting defects in an imaging system as in claim 16 wherein said gain is determined by varying gain and measuring standard deviation.

25. A method for correcting defects in an imaging system as in claim 16 wherein said gain is determined by varying gain and measuring spatial frequency components.

26. A method for correcting defects in an imaging system as in claim 16 wherein said gain is determined for every code value.

27. A method for correcting defects in an imaging system as in claim 16 wherein said gain is determined at selected code values and best fit curve is determined.

28. A method for correcting defects in an imaging system as in claim 16 wherein said gain is constant for all code values.

29. A method for correcting defects in an imaging system as in claim 16 wherein said gain is linear as a function of code value.

30. A method for correcting defects in an imaging system as in claim 17 wherein said gain the first derivative of the response characteristic of the pixilated device.

31. A method for correcting defects as in claim 1 wherein defect maps are created at multiple code values.

32. A method for correcting defects in an imaging system as in claim 1 wherein multiple defect maps corresponding to multiple pixilated devices are generated.

33. A method for correcting defects in a spatial light modulator printing system comprising the steps of:

transmitting a digital image to a spatial light modulator based printing system;

printing said digital image;

scanning said printed image to produce a digital version of said printed image;

comparing variations in intensity between each image pixel and a reference image pixel;

deriving a correction factor from said comparison;

deriving a gain;

applying said correction factor and gain to said digital image; and

printing said corrected digital image.

34. A printing assembly which prints two-dimensional swaths on a media comprising:

a light source;

illumination optics which receive light from said light source and images said light at a beamsplitter element which images one polarization state of light at a spatial light modulator, wherein an essentially telecentric illumination is created at said spatial light modulator;

a video board which inputs a first digital image to said spatial light modulator;

a print lens assembly which images said first digital image onto said media to create a printed image;

a scanner which digitizes said printed image to create a resulting image, and

a microprocessor which compares said resulting image to said first digital image and generates a correction factor which is applied to said first digital image.

35. A printing assembly according to claim 7, further comprising a plurality of said spatial light modulators which each represent a different color.

36. A printing assembly according to claim 7, wherein said print lens provides a magnified image on said photosensitive media.

37. A method for correcting defects in an imaging system comprising the steps of:

transmitting a digital image to at least one spatial light modulator;

displaying said resulting image;

comparing variations in intensity between each image pixel and at least one reference image pixel;

deriving a correction factor from said comparison;

determining gain of correction at each code value for each image pixel; and

applying said correction factor and gain to said digital image.